

YOUR VISIT

EOSINOPHILIC ESOPHAGITIS

WINTER 2024

WORKBOOK
Tools for today's
appointment



COMPLIMENTARY COPY
TAKE ONE HOME

STAY ON TRACK:
**RECORD YOUR
MEALS IN AN
ELIMINATION
DIET CHART**

page 17

SCAN ME
Access this
content online. Use
your mobile phone
camera to activate
the QR code.



CHECKLIST TO TRACK YOUR TREATMENT page 23

QUESTIONS TO ASK

USE THIS GUIDE TO HELP YOU GATHER THE INFORMATION YOU NEED FROM YOUR DOCTOR.

➤ What tests will you use to figure out the source of my inflammation?

➤ Will I need to go on an elimination diet?

➤ What treatments are available for EoE?

➤ At what point is surgery necessary?

➤ When should I call you?

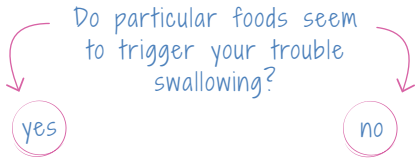
➤ Treatments I've tried:

	WHAT TYPE AND DOSE/AMOUNT?	HOW WELL DID IT WORK?	DID YOU HAVE SIDE EFFECTS/ PROBLEMS?
MEDICATION DOSE			
OTHER TREATMENTS/ LIFESTYLE CHANGES			

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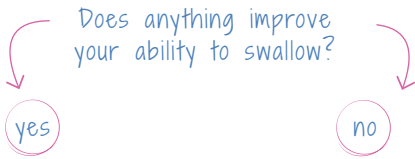
GETTING TO THE BOTTOM OF IT

ANSWERS TO THESE QUESTIONS CAN HELP YOUR DOCTOR BETTER UNDERSTAND HOW YOUR EoE IS AFFECTING YOU.



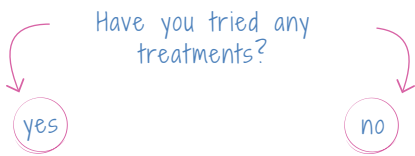
Which foods?

Have you kept a symptom diary?



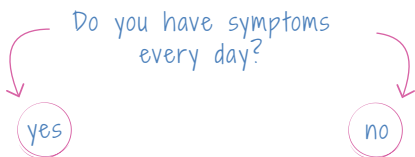
What is it?

How often do you struggle with swallowing?



Did they work?

Talk to your doctor about options.



Do they affect every meal?

How often do you have them?

“If you start having new or worsening pain when you swallow, are vomiting up your food more often, or have to go to the hospital for an obstruction, **TALK TO YOUR GASTROENTEROLOGIST AS SOON AS POSSIBLE. DON'T WAIT UNTIL YOUR NEXT CHECKUP TO CHECK IN.**”

CRAIG C. REED, MD, GASTROENTEROLOGIST AND ASSISTANT PROFESSOR OF MEDICINE AT THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE IN CHAPEL HILL



DUPIXENT IS THE FIRST & ONLY FDA-APPROVED
TREATMENT FOR EoE
(EOSINOPHILIC ESOPHAGITIS)
A breakthrough treatment for ages 12+ years
who weigh at least 88 lb (40 kg)

- DUPIXENT was proven to reduce **DIFFICULTY SWALLOWING**
- DUPIXENT reduced eosinophils in the esophagus, which contribute to inflammation
- DUPIXENT targets an underlying source of inflammation, which is a cause of EoE

INDICATION

DUPIXENT is a prescription medicine used to treat adults and children 12 years of age and older, who weigh at least 88 pounds (40 kg), with eosinophilic esophagitis (EoE). It is not known if DUPIXENT is safe and effective in children with eosinophilic esophagitis under 12 years of age and who weigh at least 88 pounds (40 kg).

IMPORTANT SAFETY INFORMATION

Do not use if you are allergic to dupilumab or to any of the ingredients in DUPIXENT[®].

Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you:

- have a parasitic (helminth) infection.
- are scheduled to receive any vaccinations. You should not receive a “live vaccine” right before and during treatment with DUPIXENT.
- are pregnant or plan to become pregnant. It is not known whether DUPIXENT will harm your unborn baby.
 - A pregnancy registry for women who take DUPIXENT during pregnancy collects information about the health of you and your baby. To enroll or get more information call 1-877-311-8972 or go to <https://mothertobaby.org/ongoing-study/dupixent/>.
- are breastfeeding or plan to breastfeed. It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins and herbal supplements.

Especially tell your healthcare provider if you are taking oral, topical, or inhaled corticosteroid medicines or if you have EoE and asthma and use an asthma medicine. **Do not** change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

IMPORTANT SAFETY INFORMATION cont'd

DUPIXENT can cause serious side effects, including:

- **Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe.** Stop using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, swelling of the face, lips, mouth, tongue or throat, fainting, dizziness, feeling lightheaded, fast pulse, fever, hives, joint pain, general ill feeling, itching, skin rash, swollen lymph nodes, nausea or vomiting, or cramps in your stomach-area.
- **Joint aches and pain.** Some people who use DUPIXENT have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

The most common side effects in patients with eosinophilic esophagitis include injection site reactions, upper respiratory tract infections, cold sores in your mouth or on your lips, and joint pain (arthralgia).

Tell your healthcare provider if you have any side effect that bothers you or that does not go away.

These are not all the possible side effects of DUPIXENT. Call your doctor for medical advice about side effects. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Use DUPIXENT exactly as prescribed by your healthcare provider. It's an injection given under the skin (subcutaneous injection). Your healthcare provider will decide if you or your caregiver can inject DUPIXENT. **Do not** try to prepare and inject DUPIXENT until you or your caregiver have been trained by your healthcare provider. In children 12 years of age and older, it's recommended DUPIXENT be administered by or under supervision of an adult.

Please see Brief Summary of Prescribing Information on next page.

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**Brief Summary of Important Patient Information about DUPIXENT® (dupilumab) Rx Only
(DU-pix'-ent)
injection, for subcutaneous use**

What is DUPIXENT?

- DUPIXENT is a prescription medicine used:
 - to treat adults and children 12 years of age and older, who weigh at least 88 pounds (40 kg), with eosinophilic esophagitis (EoE).
- DUPIXENT works by blocking two proteins that contribute to a type of inflammation that plays a major role in EoE.
- It is not known if DUPIXENT is safe and effective in children with EoE under 12 years of age and who weigh at least 88 pounds (40 kg).

Who should not use DUPIXENT?

Do not use DUPIXENT if you are allergic to dupilumab or to any of the ingredients in DUPIXENT. See the end of this summary of information for a complete list of ingredients in DUPIXENT.

What should I tell my healthcare provider before using DUPIXENT? Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you:

- have eye problems.
- have a parasitic (helminth) infection.
- are scheduled to receive any vaccinations. You should not receive a “live vaccine” right before and during treatment with DUPIXENT.
- are pregnant or plan to become pregnant. It is not known whether DUPIXENT will harm your unborn baby.
 - **Pregnancy Exposure Registry.** There is a pregnancy exposure registry for women who take DUPIXENT during pregnancy. The purpose of this registry is to collect information about the health of you and your baby. Your healthcare provider can enroll you in this registry. You may also enroll yourself or get more information about the registry by calling 1-877-311-8972 or going to <https://mothertobaby.org/ongoing-study/dupilumab/>.
- are breastfeeding or plan to breastfeed. It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all of the medicines you take including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Especially tell your healthcare provider if you:

- are taking oral, topical, or inhaled corticosteroid medicines
- have EoE and asthma and use an asthma medicine

Do not change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

How should I use DUPIXENT?

- **See the detailed “Instructions for Use” that comes with DUPIXENT for information on how to prepare and inject DUPIXENT and how to properly store and throw away (dispose of) used DUPIXENT pre-filled syringes and pre-filled pens.**

- Use DUPIXENT exactly as prescribed by your healthcare provider.
- Your healthcare provider will tell you how much DUPIXENT to inject and how often to inject it.
- DUPIXENT comes as a single-dose pre-filled syringe with needle shield or as a pre-filled pen.
- DUPIXENT is given as an injection under the skin (subcutaneous injection).
- If your healthcare provider decides that you or a caregiver can give the injections of DUPIXENT, you or your caregiver should receive training on the right way to prepare and inject DUPIXENT. **Do not** try to inject DUPIXENT until you have been shown the right way by your healthcare provider. In children 12 years of age and older, it is recommended that DUPIXENT be given by or under supervision of an adult.

- **If your dose schedule is every week and you miss a dose of DUPIXENT:** Give the DUPIXENT injection as soon as possible and start a new every week dose schedule from the time you remember to take your DUPIXENT injection.
- If you inject too much DUPIXENT (overdose), get medical help or contact a Poison Center expert right away at 1-800-222-1222.
- Your healthcare provider may prescribe other medicines to use with DUPIXENT. Use the other prescribed medicines exactly as your healthcare provider tells you to.

What are the possible side effects of DUPIXENT?

DUPIXENT can cause serious side effects, including:

- **Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe.** Stop using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, swelling of the face, lips, mouth, tongue, or throat, fainting, dizziness, feeling lightheaded, fast pulse, fever, hives, joint pain, general ill feeling, itching, skin rash, swollen lymph nodes, nausea or vomiting, or cramps in your stomach-area.
- **Joint aches and pain.** Joint aches and pain can happen in people who use DUPIXENT. Some people have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

The most common side effects of DUPIXENT in patients with atopic dermatitis include:

injection site reactions, upper respiratory tract infections, cold sores in your mouth or on your lips, and joint pain (arthralgia). The following additional side effects have been reported with DUPIXENT: facial rash or redness. Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all of the possible side effects of DUPIXENT.

Call your doctor for medical advice about side effects. You may report side effects to FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

How should I store DUPIXENT?

- Store DUPIXENT in the refrigerator at 36°F to 46°F (2°C to 8°C).
- Store DUPIXENT in the original carton to protect from light.
- DUPIXENT can be stored at room temperature up to 77°F (25°C) up to 14 days. Throw away (dispose of) any DUPIXENT that has been left at room temperature for longer than 14 days.

- **Do not** heat or put DUPIXENT into direct sunlight.
- **Do not** freeze. **Do not** shake.
- **Keep DUPIXENT and all medicines out of the reach of children.**

General information about the safe and effective use of DUPIXENT. Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use DUPIXENT for a condition for which it was not prescribed.

Do not give DUPIXENT to other people, even if they have the same symptoms that you have. It may harm them.

This is a brief summary of the most important information about DUPIXENT for this use. If you would like more information, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for more information about DUPIXENT that is written for healthcare professionals.

For more information about DUPIXENT, go to www.DUPIXENT.com or call 1-844-DUPIXENT (1-844-387-4936)

What are the ingredients in DUPIXENT?

Active ingredient: dupilumab
Inactive ingredients: L-arginine hydrochloride, L-histidine, polysorbate 80, sodium acetate, sucrose, and water for injection

Manufactured by: Regeneron Pharmaceuticals, Inc., Tarrytown, NY 10591
U.S. License # 1760; Marketed by sanofi-aventis U.S. LLC, (Bridgewater, NJ 08807) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591)
DUPIXENT® is a registered trademark of Sanofi Biotechnology / ©2022 Regeneron Pharmaceuticals, Inc. / sanofi-aventis U.S. LLC. All rights reserved.
Issue Date: October 2022

THE LATEST ON

EOSINOPHILIC ESOPHAGITIS

2x

HOW MUCH MORE LIKELY YOU ARE TO HAVE EoE if you are allergic to milk.

SOURCE: *The Journal of Allergy and Clinical Immunology: In Practice*

Maybe Less *is* More

If you've tried it, you know that the six-food elimination diet for EoE is no easy feat! But new research shows that cutting dairy alone may be just as effective. In a study, 129 adults with EoE ages 18 to 60 dropped dairy for 6 weeks. Half of them also quit wheat, soy, eggs, nuts, and seafood. In the dairy-only group, 40% went into remission. In the six-food group, 34% hit that mark. The two groups saw similar improvements in symptoms and quality of life, too. If you're considering an elimination diet, you might want to start with just dairy.

SOURCE: *The Lancet Gastroenterology and Hepatology*

Cause for Hope

Because EoE is considered a relatively new disease, scientists are still trying to understand the body processes behind it. In 2022, the FDA approved the first drug to treat this condition. It blocks certain substances in the body that cause the inflammation involved in EoE. Research suggests this may be just the tip of the iceberg. Studies currently underway examine more than half-a-dozen other molecules in the body that also promote EoE. The results could bring more options to people living with this condition in the coming years.

SOURCE: *Current Opinion in Pharmacology*

Non-Food Triggers of EoE

Some people resort to extremely limited diets to try to control their EoE and still get no relief. But food allergies may not be the only trigger of this condition. Recent research analyzed numerous studies of potential EoE triggers and causes. In some people, seasonal allergies may be to blame. In these cases, eliminating exposure to seasonal allergens, such as grass, pollen, and mold, resolves EoE. Researchers have also noted that more people may get diagnosed with EoE in the spring and summer, when these allergens are active, and that disease severity seems to be greatest at this time of year, too.

SOURCE: *Immunology and Allergy Clinics of North America*

150,000

ESTIMATED NUMBER OF PEOPLE in the U.S. who have EoE.

SOURCE: *JAMA*

WHAT YOU SHOULD KNOW

ANSWERS TO YOUR COMMONLY ASKED EoE QUESTIONS

By Sonya Collins | Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Mark Holbreich, MD, an allergist in Indianapolis, IN, shares some basic information about eosinophilic esophagitis.

Q. What is eosinophilic esophagitis (EoE)?

It's considered a rare disease, but it's probably more common than we think. It happens when white blood cells called eosinophils build up in the esophagus and cause inflammation. If left untreated, it progresses and slowly narrows the esophagus over many years and causes difficulty swallowing solid food.

Q. What causes EoE?

The whole picture is still unclear. It's likely a combination of genetics and things that you are exposed to in the environment and certain foods. The general consensus as to what ultimately triggers the disease is an allergic reaction.

Q. What are the symptoms?

The hallmark of the disease is difficulty swallowing solid food and choking on food. For a few years, you may just write it off as "I just didn't chew my food carefully," "I ate too fast," "I should drink some water." Then you start accommodating so you can eat problematic foods—usually foods that go down in a glob like meat, rice, and bread. You cut it into smaller pieces. You chew more carefully.

Eventually, eating becomes so uncomfortable that you seek care. Or food gets stuck in your esophagus—it won't go up or down—and you go to the emergency room.

Q. What is the treatment for EoE?

First, you might try an acid reflux medicine called a proton pump inhibitor. They reduce inflammation in the esophagus for about 50% of people who have EoE, so they just take it for the rest of their life.

The next option is a swallowed steroid you get through an asthma inhaler or in liquid form.

Third is an elimination diet. A diet that removes eggs, dairy, wheat, peanuts, soy, fish, and shellfish helps 40% to 50% of people. But every time you add a food back in to see if you can tolerate it, you have to do an endoscopy to make sure it's not affecting the esophagus. That's six to seven endoscopies within a year. So now we tell people to try to eliminate just gluten and dairy. If they do well, they can stay on it. If not, we can try something else.

If other treatments fail, we have a new FDA-approved drug. It's a biologic agent used to treat several allergic diseases. And it's a weekly injection you give yourself at home.



AN INSIDE LOOK AT EOSINOPHILIC ESOPHAGITIS

By Kendall K. Morgan | Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

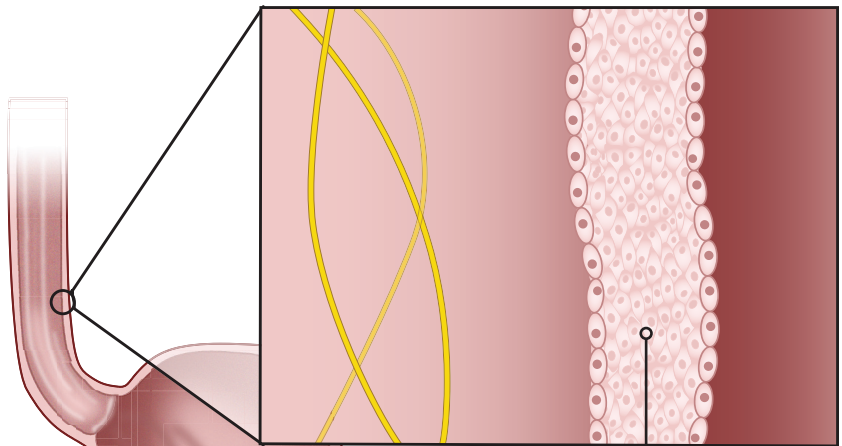
1

Normal Esophagus

Your esophagus is a long, muscular tube that sends food and water through your neck and chest into your stomach.

Duodenum

Stomach



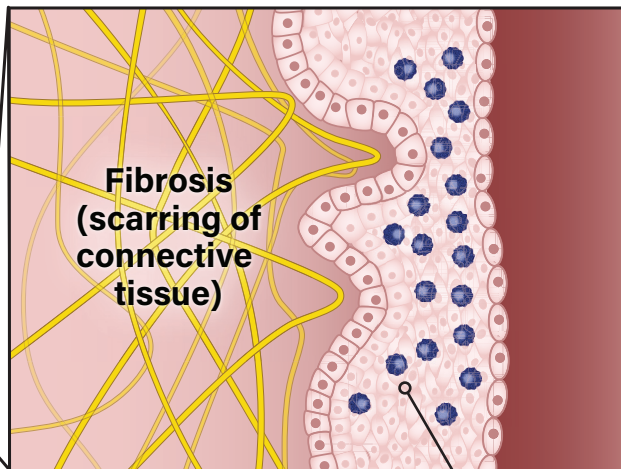
2

Normal Esophagus Epithelium

The lining of a healthy esophagus is made of a thin layer of cells and should be pink, flat, and regular.

4 Eosinophilic Esophagitis (EoE)

In EoE, eosinophils build up in the lining of your esophagus, causing damage to your esophageal epithelium. When left unchecked, this damage leads to fibrosis. Instead of being flat and smooth, your esophagus may narrow in places, forming irregular rings that make swallowing hard.



**Fibrosis
(scarring of
connective
tissue)**

3 Eosinophils

A special type of immune cell involved in inflammation and allergic disorders.

5 Irritation, Fibrosis, Narrowing

When your body tries to heal damaged tissue and leaves abnormally thick, stiff, scarred tissue behind.

SOURCES: The Human Protein Atlas, GERD.org, Cincinnati Children's, Mayo Clinic, Cleveland Clinic

SYMPTOMS AND CAUSES

BASIC INFORMATION ABOUT YOUR EoE

By Rachel Reiff Ellis

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Eosinophilic esophagitis, or EoE, is a disorder that affects your esophagus, the muscular tube that connects your throat to your stomach.

When you have it, large numbers of white blood cells called eosinophils build up in your esophagus. It happens because of an immune system overreaction.

“The body’s immune system goes into overdrive and lights a forest fire in response to something that is benign, such as food,” says David C. Kunkel, MD, a gastroenterologist and associate clinical professor of medicine at the University of California, San Diego. “And the forest in this case happens to be your food pipe.”

How do you get it?

Although researchers don’t know the exact mechanism that causes EoE, there are certain factors that influence it. One of these factors is genetics.

“Some people have a genetic piece that predisposes them to have an immune system that’s really raring to go

and operating with a trip wire that’s set just too low,” Kunkel says.

Another factor is triggers such as asthma, or certain proteins in food that cause an allergic reaction. Some people notice their EoE symptoms get worse during the spring and summer when they have seasonal allergies.

What symptoms does it cause?

The symptoms you feel from EoE aren’t like typical allergic reactions that cause itching or red splotches on your skin.

“It’s not the kind of allergic reaction that involves hives or trouble breathing,” says Shahwali Arezo, MD, a gastroenterologist at Riverside Health System in Williamsburg, VA.

Instead, you’re more likely to have trouble swallowing, which is a hallmark symptom of EoE. You may drink a lot of fluids to help swallow food and get full quickly and not be able to finish meals. Sometimes food gets stuck in your esophagus because it’s



narrower, and you may have to go to the emergency room.

You may also feel pain in your chest or severe acid reflux that can feel like a heart attack. Usually you can’t relieve this pain with an antacid, Arezo says.

“Some percentage of people with EoE respond to proton-pump inhibitors [medication for acid reflux], and may get misdiagnosed with GERD because of it,” he says.

Stomach pain and vomiting are common, as is regurgitation.

“That’s where things are coming back up into the mouth, which isn’t normal,” Kunkel says. “It should generally be a one-way street.”

RISK FACTORS

Your chances are slightly higher of getting EoE if:

- + You have atopic dermatitis, asthma, or food or environmental allergies
- + You’re a White male
- + You have a family history of EoE

KEEP A RECORD

USE THIS SYMPTOM TRACKER TO GIVE YOU AND YOUR DOCTOR A BETTER OVERALL SNAPSHOT OF YOUR CONDITION.

“When monitoring your EoE, you want to pay attention to how difficult it is to swallow food and liquid at each meal,” says Bryan G. Sauer, MD, gastroenterologist in the Digestive Health Center at UVA Health in Charlottesville, VA. “How often do you have trouble swallowing? Are you doing anything to get foods down easier? Are you avoiding certain foods or social situations because of your symptoms? This overview helps your doctor get a clearer picture of how best to treat you.”

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
EoE SYMPTOMS							
MEDICATION SIDE EFFECTS							
ANXIETY LEVEL							
FOODS I'VE EATEN							
ACTIVITIES							
MOOD							

SCAN OR COPY THIS PAGE BEFORE YOU FILL IT IN TO USE FOR TWO OR THREE MONTHS

LIFE WITH EoE

MY JOURNEY TO DIAGNOSIS, TREATMENT, AND MANAGEMENT

By Mike Foley

Reviewed by Neha Pathak, MD,
WebMD Lead Medical Editor

I'd never had any health problems. Then two years ago, literally overnight, I had upper abdominal pressure, bloating, and pain, like I'd swallowed a couple of bricks and they were sitting in my upper stomach. I vomited acid and had burning pain in my chest. I thought I was having a heart attack.

In the ER, I got tests, blood work, urine, X-ray, and ultrasound but no diagnosis. I got a primary care doctor and a GI doctor. After an endoscopy, the GI diagnosed me with EoE.

The first options he offered were a PPI (proton pump inhibitor, a type of medication) and an inhaler that you spray into your mouth and swallow. I used the inhaler, but I had to stop because it made me really aggressive. I was like Dr. Jekyll and Mr. Hyde. I didn't want to use the PPI because of my concern about the potential long-term risks. So I tried alternative stuff—teas, yoga—but none of it helped.

I finally tried the PPIs, but they made that bloating and pressure in my upper stomach worse. I thought, 'Gosh, I can't take anything.'

So I got strict with my diet. Nothing fried or acidic.

I did the six-food elimination diet, but that didn't help. Finally, I was down to just eating plain chicken and rice. No sauce, salt, pepper. Still no improvement.

Eventually, my esophagus started closing up. I wasn't able to swallow food. I pureed everything into a soup. I lost 40 pounds. Then my GI offered me a biologic. I was really scared to take it because it was a shot, but I was so desperate that I would have tried anything.

I gave it about 5 weeks, and during that time I had to go to the hospital again. While I was there, I got so hungry that I just started eating a bag of chips. I thought, 'If I can't swallow it, at least I'm in the hospital and they can help me.' But I wasn't having any trouble swallowing. I thought, 'Maybe the medicine is working.'





I still take it every week. I haven't had my throat close up again; I haven't needed another dilation; and I've managed to put a few pounds back on.

I still get that upper abdominal pressure that feels like the two bricks. No doctor has ever told me whether that symptom is or isn't related to EoE. But a lot of people in my online groups are reporting this symptom, too, and saying that their EoE treatment isn't helping it either.

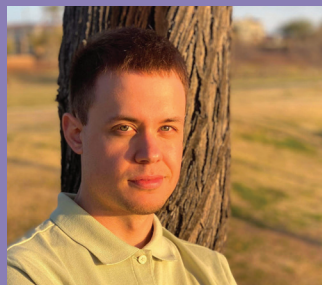
My doctor prescribed me an anxiety medication that I can take as needed when the pressure flares up. That helps in about 45 minutes.

I also have other ways I manage my symptoms. My partner rolls a foam roller up and down my back when I feel like I can't swallow. That seems to relax the esophagus so I can eat.

A lot of people don't believe in this, but foot reflexology has helped a lot, too. For some reason, a 20-minute bike ride also relieves the pressure. Hot baths, heating pads, and sometimes ice packs help, too.

I have a lot of different ways I manage it. I've really come a long way.

MIKE'S TIPS



- + **Listen to your body.** "That's how I learned that hot baths and foam rollers might help."
- + **Get support.** "I'm in EoE groups with thousands of members and have talked to hundreds of people."
- + **Educate yourself.** "I had never heard of EoE, but I started researching it all day, every day."

“THROUGH YEARS OF RESEARCH, WE NOW KNOW THAT MILK OR DAIRY IS THE MOST COMMON TRIGGER FOR EoE. This is followed by egg and wheat in most studies.”

JAY LIEBERMAN, MD, ALLERGIST AT LE BONHEUR CHILDREN'S HOSPITAL IN MEMPHIS, TN, AND CHAIR OF THE AMERICAN COLLEGE OF ALLERGY, ASTHMA, & IMMUNOLOGY'S FOOD ALLERGY COMMITTEE

GROCERY LIST

HERE'S WHAT YOU SHOULD PICK UP AT THE STORE

By Kendall K. Morgan

Reviewed by Neha Pathak, MD,

WebMD Lead Medical Editor

One of the most common ways to treat eosinophilic esophagitis (EoE) is to take the foods that trigger it out of your diet. You might do tests to find out which foods bother you specifically. Sometimes people also try an elimination diet, in which they remove up to six foods that commonly trigger EoE.

These foods to avoid may include:

- Dairy products
- Wheat
- Eggs
- Soy
- Peanuts and tree nuts
- Fish and shellfish

If you need to cross certain foods off your grocery list, what should you buy at the store?

Here's a good list to keep you eating well and help you replace some of what you're missing:

- Coconut milk
- Rice milk
- Oat milk
- Hemp milk
- Pea milk
- Rice
- Oats
- Corn
- Quinoa
- Millet
- Buckwheat
- Gluten-free flour
- Beef
- Chicken
- Pork
- Beans, lentils, and chickpeas
- Rice
- Potatoes
- Fruit
- Vegetables
- Coffee
- Tea
- Daily multivitamin
- Vitamin D and calcium-fortified orange juice

You can find lots of resources online for meals and snacks that suit your new diet. Remember when you're at the store to check food labels for any packaged items on your list to make sure they don't contain allergens or ingredients you're eliminating. Don't rely on claims on the front of a package that say a food is dairy-, nut-, or wheat-free.

ELIMINATION DIET

USE THIS TOOL TO KEEP A RECORD OF YOUR MEALS AND SYMPTOMS.

A typical six-food elimination diet (SFED) for EoE starts with the subtraction of wheat, milk, eggs, nuts, soy, fish, and shellfish. After 6 weeks on the SFED diet, you'll introduce one of the eliminated foods every 2 to 4 weeks. Using this weekly table, you can record your symptoms to get a better overall picture of how your body reacts to each reintroduced food.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
FOOD INTRODUCED THIS WEEK							
MORNING SYMPTOMS							
MIDDAY SYMPTOMS							
EVENING SYMPTOMS							

Check in with your doctor as you progress through your elimination diet.

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DIET IS KEY

THESE FOODS COULD BE SETTING OFF YOUR EoE SYMPTOMS

By Rachel Reiff Ellis

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

For most people with EoE, cutting certain foods out of your diet is an effective method for treating your symptoms. Although it can be time-consuming and at times overwhelming, it's a low-risk choice that can deliver positive results and move you toward a better quality of life.

"Not all people with EoE have food allergies that contribute to their symptoms, but at least 80% of cases are induced by food allergens," says Deepa M. Grandon, MD, an allergist/immunologist at Cleveland Clinic Abu Dhabi, UAE.

Your health care team will help you figure out your trigger foods in a specific way so you know what may be safe and what needs to go for good.

Target food groups

When EoE symptoms happen because of a food allergy, it means certain proteins from those foods trigger an allergic inflammatory response in your esophagus. Certain food groups are more likely to cause this reaction than others.

The most common method for food elimination is the six-food elimination diet (SFED). On this diet, you cut the common culprits such as wheat, milk, eggs, nuts, soy, fish, and shellfish completely out of your diet. After 6 weeks, your doctor does an endoscopy and biopsy to see if your

WHO YOU'LL SEE

Here are three specialists who can help you as you navigate dietary changes.

- + Allergist/Immunologist
- + Nutritionist
- + Gastroenterologist





TETRA IMAGES/VIA GETTY IMAGES

inflammation has gone down.

It can be challenging to give up so many foods at once, so some doctors instead try a modified approach where they focus on only a couple of top offenders first.

“We’re finding more and more that patients are more willing to do a step-up type of diet where they eliminate milk and wheat first and then see if their inflammation resolves over time,” says Derek A. Damin, MD, assistant professor of clinical medicine at Vanderbilt University Medical Center in Nashville, TN.

Grandon says that for people who fit the criteria for food elimination, 43% will respond to this smaller change alone.

When to reintroduce

Once the elimination period has passed, your doctor will have you start eating one of the foods you cut out. Then they’ll do certain tests to see how your body responds. Over time, you’ll continue to test each food you’ve eliminated.

“Typically, [you] can find the culprit food within the first meal of reintroduction,” Grandon says.

Your doctor does this by doing an endoscopy and taking a small sample of tissue from your esophagus. Then they check the sample to see if your level of eosinophils—the immune cells that trigger inflammation—has gone down.

“Many times one of the best indicators for a food causing an individual’s inflammation is in their history,” Damin says. “They’ll say, ‘I think dairy has been bothering me over the past months or years,’ and then that will be the culprit.”

WAYS TO ELIMINATE

Deepa M. Grandon, MD, shares the three main dietary restriction strategies for EoE.

- 1. Empiric elimination diet:** Take out two to six foods and gradually add back in.
- 2. Test-directed diet:** Based on skin or blood allergy test results.
- 3. Elemental diet:** Liquid meal replacement.

TIPS FOR MANAGING COSTS

HOW TO HANDLE YOUR EoE-RELATED EXPENSES

By Rachel Reiff Ellis

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

After an EoE diagnosis, you want the best treatment plan to keep your symptoms under control. And although you want to do what's necessary, you may also be wondering what these treatments will cost.

Your expenses will vary based on your plan and insurance coverage, but there are ways to approach the financial part of your care with savvy.

Know the numbers

Your doctor may start with medications such as proton-pump inhibitors (PPIs) or inhaled steroids, or a biologic, or they may suggest an elimination diet. These options range in cost, and you may try several before finding what works.

Over-the-counter PPIs are inexpensive but generally the least effective treatment for EoE. Prescription steroids are more expensive.

"Typically, one inhaler is more than \$300 and you may need two of them per month," says Evan S. Dellon, MD, MPH, professor of medicine and adjunct professor of epidemiology at the



University of North Carolina School of Medicine at Chapel Hill. Other options can be as much as \$1,000.

Biologics are the most effective treatment, but costly. You get them from a specialty pharmacy and take them as weekly injections. Although the price can be steep, Dellon says there are forms of help available.

"There are copay assistance programs with the company [that makes the drug]," he says. "It's actually quite generous, but they're still the most expensive possible option right now."

Expect hidden costs

Most people with EoE respond well to dietary therapy. In a study, Dellon found that people

WHO CAN HELP?

These organizations can assist.

- + American Partnership for Eosinophilic Disorders: **APFED.org**
- + Campaign Urging Research for Eosinophilic Disease: **CUREDFoundation.org**
- + Patient Access Network Foundation: **PANFoundation.org**



following the six-food elimination diet (SFED) added nearly \$700 to their yearly grocery bill.

“It’s expensive if all your foods have to be wheat-, dairy-, and egg-free,” he says. “And those estimates were from 2010, so that number might be doubled by now with inflation.”

You may be able to cut some of these costs by talking to a nutritionist, says Elizabeth T. Jensen, MPH, PhD, associate professor of epidemiology and prevention and associate professor of gastroenterology at Wake Forest University School of Medicine in Winston-Salem, NC.

“They can provide information and resources about how to adhere to the diet in a way that is simple and not as costly for you,” she says.

Compare plans

One of the best ways to save is to take a hard look at your insurance coverage and see if moving to another plan could reduce overall costs.

“You may need something with a higher

monthly premium that’s going to be a lower deductible with better pharmacy coverage,” Dellon says.

Even if you have to pay an extra \$100 to \$200 a month, it can pay off if you’re facing multiple endoscopies and more expensive medications.

Check clinical trials

EoE treatment research is ongoing, and as a result, there are many clinical trial options. Your doctor can help you see if you qualify for any open studies.

“If you’re underinsured or not insured, it’s a great way to get treatments,” Dellon says. “Everything—the endoscopies and medications and all of your care—is paid for.”

Connect with others

There are people out there who may have good advice about how to manage therapy costs.

“A lot of patient advocacy groups have a very active social media presence, which can be a way to connect with other families experiencing this and get ideas from their process,” Jensen says. You may want to run their tips by your doctor.

ELEMENTAL DIET COVERAGE

States where insurance covers liquid replacement diets for people with severe EoE:

- | | |
|-----------------|----------------|
| + Arizona | + New Jersey |
| + Connecticut | + New York |
| + Illinois | + Oregon |
| + Maine | + Pennsylvania |
| + Maryland | + Rhode Island |
| + Massachusetts | + South Dakota |
| + Minnesota | + Texas |
| + Nebraska | + Washington |
| + New Hampshire | |

Quiz

WHAT IS YOUR EoE IQ?

TAKE THIS TRUE/FALSE QUIZ TO FIND OUT

By Kendall K. Morgan

Reviewed by Neha Pathak, MD,

WebMD Lead Medical Editor



1. The main problem when you have eosinophilic esophagitis (EoE) is with your esophagus, the tube that connects your mouth and throat to your stomach.
2. EoE can be cured.

1. False ▶ EoE symptoms do show up in your esophagus. But EoE is a chronic immune system disorder. It happens mainly when your immune system reacts badly to foods that you're eating. The key to treating EoE is to limit the immune response either with medicine or by eliminating foods that trigger it.

2. False ▶ EoE is a chronic disorder of the digestive system. It's a major cause of illness that can make it hard to swallow and eat. Doctors are diagnosing EoE more now than ever before at rates that keep going up.

3. False ▶ Acid reflux happens when acid from your stomach comes up into your esophagus. EoE happens from inflammation caused by immune cells called eosinophils. Both conditions can make it hard to swallow and eat. If you have what you think is heartburn but it doesn't go away with

3. EoE is related to acid reflux.
4. A doctor can't tell if you have EoE by looking at your esophagus.
5. The only way to treat EoE is by avoiding foods that trigger it.

heartburn medicine, you could have EoE. Even though acid isn't the main problem in EoE, medicines that lower acid in your stomach sometimes can help with EoE. But those medicines don't really fix the main problem.

4. True ▶ Your doctor can't tell if you have EoE just by passing a camera and light in a flexible tube down your throat to look at your esophagus in a procedure called an endoscopy. But they will need to do an endoscopy of your esophagus to take biopsy samples. They'll use a microscope to check for immune cells called eosinophils and other signs of inflammation in small bits of your esophageal tissue.

5. False ▶ Diets that take out major food allergens or foods you have specific sensitivities to can help and are a good way to treat your EoE. But medical treatment may also help manage the condition.

NEXT STEPS

Treatment plan:

► MEDICATIONS

DRUG			
DOSE			
WHEN TO TAKE IT			
HOW TO TAKE IT			

► LIFESTYLE CHANGES

DIET CHANGES	
EXERCISE PLAN	
ANXIETY REDUCTION	
OTHER CHANGES	

My next appointment is:

I should call between visits if:

“It’s important to receive proper treatment for your eosinophilic esophagitis because over time, **THE ALLERGIC REACTION CAN CREATE PERMANENT SCAR TISSUE AND CAUSE NARROWING—ALSO CALLED A STRICTURE—IN YOUR ESOPHAGUS.**”

HOUAMAN REZAIZADEH, MD,
ASSOCIATE PROFESSOR OF MEDICINE AND DIRECTOR OF THE ESOPHAGEAL DISEASE PROGRAM AT UCONN HEALTH IN FARMINGTON, CT

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